

REMARKS

Claims 1-16 are pending in the present application. Claims 1-4 and 7-16 stand rejected by the present office action. Claims 7,8,10 and 11 were objected to for failing to limit the parent claims. Claims 9-11 and 16 were rejected under 35 USC 102(b) as being anticipated by Li et al. (US 5,820,999). Claims 12-14 were rejected under 35 USC 102(b) as being anticipated by Grissom (US 928,256). Claims 12-14 were rejected under 35 USC 102(b) as being anticipated by Kravets (US 4,569,263). Claims 1-4, 7-16 were rejected under 35 USC 103(a) as being unpatentable over Kravets in view of Li et al.

Claims objected to

Claims 7,8,10 and 11 were objected to for failing to limit the parent claims. Claims 7 and 8 have been amended to recite limitations more than simply a possible use. Claims 10 and 11 have been cancelled. The Applicant respectfully requests reconsideration of the above claims.

Claims rejected under 35 USC 102(b)

Claims 9-11 and 16 were rejected under 35 USC 102(b) as being anticipated by Li et al. (US 5,820,999). Claims 12-14 were rejected under 35 USC 102(b) as being anticipated by Grissom (US 928,256). Claims 12-14 were rejected under 35 USC 102(b) as being anticipated by Kravets (US 4,569,263). The Applicant respectfully requests reconsideration of the claims 12-14 in light of the attached amendments (claims 9-11 having been cancelled). In support of the request for reconsideration, the Applicant respectfully directs the Examiner's attention to the arguments below in support of allowability in response to the 35 USC 103(a) rejection. This is appropriate as claim 12 has been amended to include both the limitation of the rounding leading edge of the moving blade, as well as the scrap support as is addressed in the 103(a) arguments below.

Claims 1-4, 7-16 were rejected under 35 USC 103(a)

Claims 1-4, 7-16 were rejected under 35 USC 103(a) as being unpatentable over Kravets in view of Li et al. The office action asserts that Kravets teaches all of the cited limitations except the cutting edge of the moving blade rounded to a radius. The office action asserts that Li

shows a movable blade to have a radius; and that it would have been obvious for one skilled in the art to have modified Kravets by making the cutting edge rounded in order to eliminate slivers. The Applicant respectfully traverses these rejections, and requests reconsideration of the amended claims in light of the amendments and the foregoing arguments.

The Applicant respectfully calls the Examiner's attention to column 2, lines 45-62 of the Li et al reference. The Applicant calls attention to the fact that Li reference states "the use of a zero degree cutting angle has been found to produce an unacceptably high amount of slivers. [for use on aluminum]". The Li reference, therefore utilizes a radiused cutting edge in combination with an angled cutting arrangement (see Figure 2, the cutting blade approaches the blank from an angle). It should be noted that the Li reference is directed towards the same problems as the present invention, namely the elimination of slivers during the trimming of aluminum parts. It is equally significant to note that the Li reference in Table 1 found that a radiused blade when used at a zero degree cutting angle (perpendicular to the blank) is still quoted as producing significant slivers when used with small clearances (5%). The Li reference addressed this by angling the cutting angle.

The Office action asserts that the support illustrated in Kravets would be obvious to combine with Li to arrive at the present invention. The Applicant respectfully disagrees and traverses this assertion. The Applicant notes that Kravets does not support the scrap in a direction perpendicular to the surface of the blank, but rather supports it in an angular direction away. Similarly to Li, Kravets shears on an angular approach as opposed to the present invention. Therefore, neither alone nor in combination do Li or Kravets teach the limitations of the present invention and therefore are not properly combinable. Most significantly, however, the Applicant notes that Kravets was published more than 10 (ten) years prior to the filing of the Li et al reference. Li was directed to the same issue the present invention. Li itself recognized that a "zero degree cut results in the least amount of normal stress" (col 3, lines 32-34). And yet, Li found it necessary to introduce an increased cutting angle in order to reduce slivers even utilizing a cutting edge with a radius (thereby teaching away from any combination). If Kravets would be obvious to combine with the subject matter to arrive at the present invention, why would not Li utilize it as does the present invention to accomplish minimized slivers, with minimum clearance, and using a zero degree cutting angle. As the Li reference was directed to the same problem, and utilized a rounded cutting radius, and was filed more than a decade after

the publication of Kravets, the Applicant submits that the combination is non-obvious and the present claims should be allowed.

CONCLUSION

The Applicant would like to thank the Examiner for his assistance. In light of the above amendments and remarks, Applicant submits that all objections and rejections are now overcome. The Applicant has added no new material by this Amendment. The Application is now in condition for allowance and expeditious notice thereof is earnestly solicited.

Should the Examiner have any questions or comments that would place the application in better condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



Thomas Donohue
Reg. No. 44,660
Artz & Artz, P.C.
28333 Telegraph Road, Suite 250
Southfield, MI 48034
(248) 223-9500
(248) 223-9522 (Fax)

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"VERSION WITH MARKINGS TO SHOW CHANGES MADE"

Please kindly cancel claims 9-11 and 14-16.

Claims 1, 7, 8, and 12 have been replaced with the follows:

1. An apparatus for trimming scrap from a blank comprising:
 - a steady blade;
 - a clamping pad securing the blank to said steady blade;
 - a moving blade movable past said steady blade for trimming the blank, said moving blade moving substantially perpendicular to an upper surface of said blank;
 - a radius formed on the leading edge of said moving blade adapted to reduce defects in the blank associated with the trimming process; and
 - a support element in communication with the scrap and adapted to reduce defects in the blank associated with the trimming process, said support element moving substantially perpendicular to said upper surface.
7. An apparatus as described in claim 1 wherein said moving blade is adapted for use with aluminum alloy blanks.
8. An apparatus as described in claim 1 wherein said moving blade is adapted for use in an automated stamping apparatus.
12. A method of reducing the production of defects during trimming operations comprising:
 - holding a blank between a steady blade and a clamping pad;
 - moving a moving blade past said steady blade to trim scrap off of said blank, said moving blade moving perpendicular to an upper surface of said blank; [and]
 - supporting said scrap to reduce defects in said blank associated with the trimming process;
 - keeping said scrap substantially parallel to said scrap's original orientation during the trimming process; and

• reducing the strain concentration caused by said moving blade on said blank through the use of a radius formed on the leading edge of said moving blade.